

LAFAYETTE

TE-22

SINE SQUARE WAVE AUDIO GENERATOR

OPERATING MANUAL

LAFAYETTE

TE-22

SINE SQUARE WAVE AUDIO GENERATOR

OPERATING MANUAL

TECHNICAL SPECIFICATIONS

Band D 20,000 - 200,000 cps

Read on same scales as Sine Waves

Weight 8.6 lbs.

APPLICATIONS

Audio generators belong to the class of the most versatile test instruments, having very numerous and diverse applications. If you are interested in acquiring an audio generator "encyclopedia", we recommend:

101 Ways to use your Audio Test Equipment

by Robert G. Middleton (Published by Sams Photofact). Its price is reasonable and its coverage more than ample. The current Lafayette catalog number of this paper-back is BK-293.

OPERATING INSTRUCTIONS

1. Rotate the Tuning Control dial until the basic setting for the desired frequency is lined up beneath the hair-line. Frequency settings are indicated by the inner scale. The outer scale is a vernier, for "fixing" settings accurately.
2. Set the Band Selector switch at the position which will provide the multiplication factor needed for a given frequency output. If $F \times 1$ is selected, frequencies may be read directly from the Tuning Control dial. If $F \times 10$ is selected, multiply the Tuning Control setting by 10 in order to determine the frequency of the audio output signal. If $F \times 100$ is selected, multiply the Tuning Control setting by 100. If $F \times 1000$ is selected, the Tuning Control setting must be multiplied by 1000.
3. Set the Wave Form switch at the sine or square wave position, as desired.
4. Shift the Off-On switch to the ON position. Allow at least five minutes for warm-up.
5. A shielded test cable, terminated with banana jacks at one end and alligator clips at the other, has been supplied. Make sure that the shielded portion of the cable is always connected to the instrument's black output terminal.

NOTE: Never connect the shield lead directly to the chassis of AC/DC equipment. To prevent danger of shock, place a capacitor (approximately .5 μ fd, 400v) in series with the shield lead before connecting it with such equipment.

6. Adjust the Amplitude control to suit your requirements.



Digitized by the Internet Archive
in 2024

https://archive.org/details/manualsplus_02398

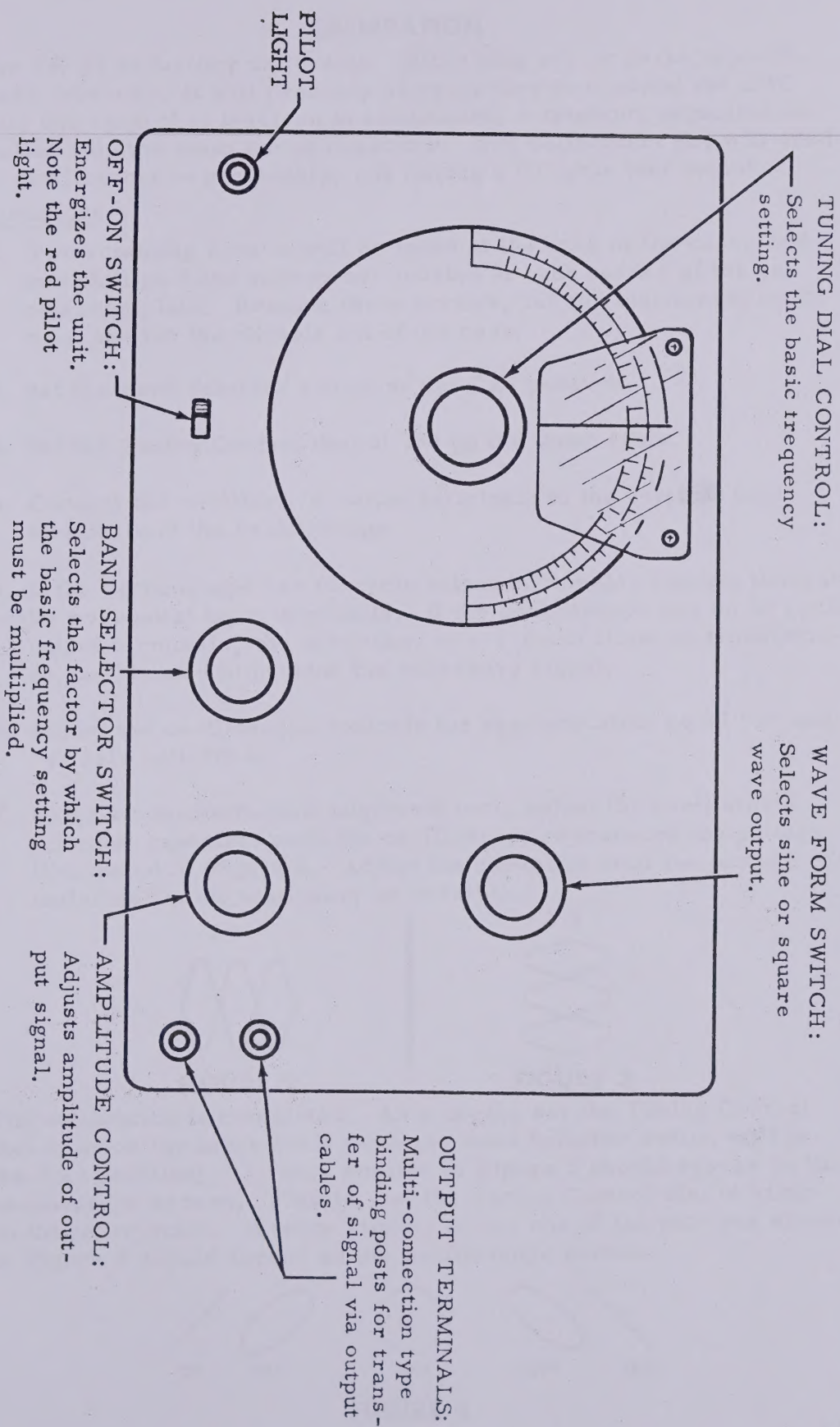


FIGURE 1 LOCATION AND FUNCTION OF CONTROLS

CALIBRATION

The TE-22 is factory calibrated. After long use or parts replacement, however, it will probably be necessary to readjust the unit. Only one control is involved in calibration; a trimmer capacitor installed atop the main tuning capacitor. For calibration you will need an oscilloscope -- preferably, one having a 60 cycle test output.

Procedure

1. Two retaining screws will be found at the back of the case, and two phillips-head screws are located at each corner of the escutcheon plate. Remove these screws, lay the instrument on its back and lift the chassis out of the case.
2. Set the Band Selector switch at the Fx1 position.
3. Set the Tuning Control dial at 180 on the inner scale.
4. Connect the oscillator's output terminals to the vertical input terminals of the oscilloscope.
5. If the oscilloscope has 60 cycle output terminals, connect them to its horizontal input terminals. If the oscilloscope has no 60 cycle output terminals, the secondary of a 6.3 volt filament transformer can be used to provide the necessary signal.
6. Adjust the oscilloscope controls for approximately equal "x" and "y" axis deflection.
7. Using a non-conductive alignment tool, adjust the oscillator's trimmer capacitor until the oscilloscope reproduces the pattern illustrated in Figure 2. Adjust the capacitor until the pattern remains as nearly stationary as possible.

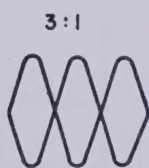


FIGURE 2

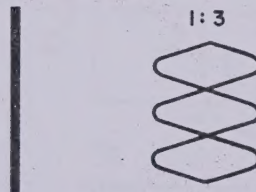


FIGURE 3

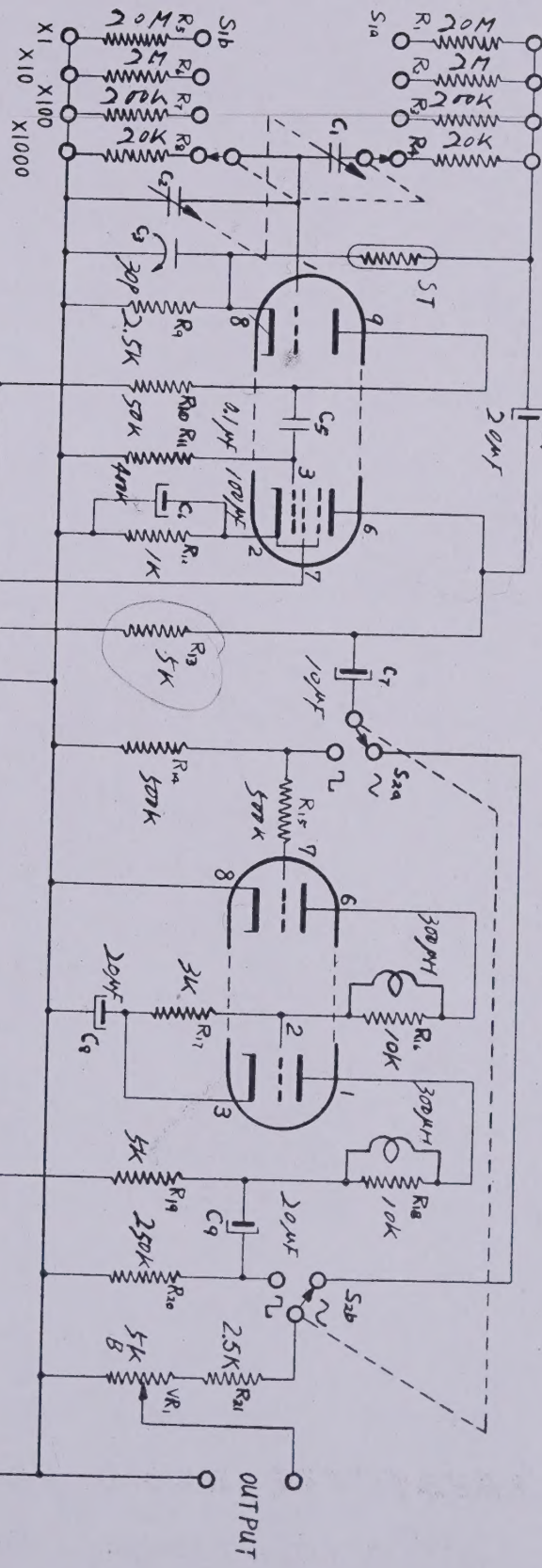
The calibration is completed. As a check, set the Tuning Control dial at 20 on the inner scale (with the Band Selector switch still at the Fx1 position). A trace similar to Figure 3 should appear on the oscilloscope screen. Finally, set the Tuning Control dial to sixty on the inner scale. A trace similar to any one of the patterns shown in Figure 4 should appear on the oscilloscope screen.



FIGURE 4

V₁ 6BM8 —

V₂ 12AT7 —



SCHEMATIC DIAGRAM

